State of Utah

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Department of
Environmental Quality

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DIVISION OF AIR QUALITY
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Director

DAQE-IN0103130029-09

March 19, 2009

Scott Mork
Graymont Western US Incorporated
3950 South 700 East Suite 301
Salt Lake City, UT 84107

Dear Mr. Mork:

Re: Intent to Approve: Approval Order Modification For Addition of Dolomitic Screen to Lime Rail Loadout and Removal of Kiln #1 Wet Scrubber, Millard County; CDS A; Attainment Area, MACT (Part 63), NSPS (Part 60), PSD, Title V (Part 70)
Project Number: N010313-0029

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Jon Black, who may be reached at (801) 536-4047.

Sincerely,

Ty L Howard, Manager
New Source Review Section

TLH:JB:kw

cc: Mike Owens
Central Utah Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

INTENT TO APPROVE: Approval Order Modification For Addition of Dolomitic Screen to Lime Rail Loadout and Removal of Kiln #1 Wet Scrubber

Prepared By: Jon Black, Engineer
Phone: (801) 536-4047
Email: jlblack@utah.gov

INTENT TO APPROVE NUMBER

DAQE-IN0103130029-09

Date: March 19, 2009

Cricket Mountain Plant

Source Contact:
Mr. Jason Ellis Environmental Manager
Phone: (801) 264-6868

Ty L Howard, Manager
New Source Review Section
Utah Division of Air Quality

ABSTRACT

Graymont Western US Incorporated (Graymont), submitted a request for addition of a Dolomitic Screen to the lime rail loadout and removal of Kiln #1 wet scrubber to Approval Order DAQE-AN0103130027-08. This project will be considered a minor Approval Order modification. This is a Prevention of Significant Deterioration (PSD) source.

Under both the NSR and Title V programs, the Cricket Mountain Plant is a major source of air emissions. The Cricket Mountain Plant is located southwest of the city of Delta in Millard County, Utah. Millard County is an attainment area of the NAAQS for all pollutants. The plant is located within 250 kilometers of several areas that are classified as Class I areas under the PSD program for the protection of air quality.

NSPS 40 CFR 60 Subparts A (General Provisions), Subpart Y (Standards of Performance for Coal Preparation Plants), Subpart HH (Standards of Performance for Lime Manufacturing Plants), Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) and Subpart IIII (Standards of Performance for Stationary Compression Ignition Engines regulations apply to this source. NESHAP 40 CFR 63 Subpart AAAAA (Lime Manufacturing Plants) and MACT 40 CFR 63 Subpart ZZZZ regulations apply to this source. Title V of the 1990 Clean Air Act applies to this source.

The addition of the Dolomitic screen will not result in an emissions increase. All potential screened lime fines are captured and directed to either the Hi-Cal Kiln Run Silo (controlled by dustcollector D-331) or the Dolomitic Kiln Run Silo (controlled by dust collector D-479). The emissions, in tons per year, will remain as follows: PM_{10} = 610.86, NO_x = 3884.17, SO_2 = 761.24, CO = 7817.80, VOC = 116.35, HAPs = 39.45.

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Millard County Chronicle Progress on April 9, 2009. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

Name of Permittee:

Graymont Western US Incorporated
3950 South 700 East Suite 301
Salt Lake City, UT 84107

Permitted Location:

Cricket Mountain Plant
32 Miles Southwest of Delta, Utah; Highway 257
PO Box 669
Delta (Millard), UT 84624

UTM coordinates:343,100 m Easting, 4,311,010 m Northing
SIC code:1422 (Limestone, Crushed & Broken)

Section I: GENERAL PROVISIONS

I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]

I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 **Lime Manufacturing Plant**
[All equipment designation numbers are those used by Graymont Western U.S. Inc.]

II.A.2 **HR-1 Haul Road**
Quarry to plant - six miles - and plant to highway with dust suppression and water.

II.A.3 **HR-2 Haul Road**
In quarry with water spray for fugitive emissions and dust control.

II.A.4 **D-91 Coal Silo Baghouse**
For Kiln #1 - Exhaust gas flow rate - 1,000 scfm [All equipment designation numbers are those used by Graymont Western U.S. Inc.]

II.A.5 **D-391 Coal Silo Baghouse**
For Kiln #3 - Exhaust gas flow rate - 1,000 scfm

II.A.6 **D-94 Coal Silo Baghouse**
For Kiln #2 - Exhaust gas flow rate - 1,000 scfm

II.A.7 **D-491 Coal Silo Baghouse**
For Kiln #4 - Exhaust gas flow rate - 1,500 scfm

II.A.8 **D-591 Coal Silo Baghouse**
For Kiln #5 - Exhaust gas flow rate - 1,000 acfm

II.A.9 **D-330 Product Baghouse**
For Kiln #3 - Exhaust gas flow rate - 11,000 scfm

II.A.10 **D-331 Product Baghouse**
For Kiln #1, #2 and loadout - Exhaust gas flow rate - 32,000 scfm

II.A.11 **D-447 Product Baghouse**
For Kiln #4 - Exhaust gas flow rate - 18,300 scfm

II.A.12 **D-463 Product Baghouse**
For Kiln #4, C-472, C-474, C-464 - Exhaust gas flow rate - 8,300 scfm

II.A.13 **D-341 Product Baghouse**
For Silo T-341 - Exhaust gas flow rate - 2,000 scfm

II.A.14 **D-530 Product Baghouse**
Product handling baghouse #1 for new screen house - Exhaust gas flow rate 9,000 acfm

II.A.15 **D-564 Product Baghouse**
Product handling baghouse #2 for new screen house - Exhaust gas flow rate - 9,000 acfm

II.A.16 **D-547 Product Baghouse**
Product handling baghouse #3 for new screen house - Exhaust gas flow rate - 9,000 acfm

II.A.17 **D-83 Lime Kiln Dust Silo Baghouse**
For Kilns #1, #2 and #3 - Exhaust gas flow rate - 6,000 scfm

II.A.18 **D-489 Lime Kiln Dust Silo Baghouse**
For Kilns #1, #2 and #3 - Exhaust gas flow rate - 6,000 scfm

II.A.19 **D-486 Lime Kiln Dust Silo Baghouse**
For Kiln #4 - Exhaust gas flow rate - 4,000 scfm

II.A.20 **D-466 Lime Kiln Dust Silo Baghouse**
For an additional silo - Exhaust gas flow rate - 4,000 scfm

II.A.21 **D-586 Lime Kiln Dust Silo Baghouse**
For Kiln #5 dust silo - Exhaust gas flow rate - 2,500 scfm

II.A.22 **D-589 Lime Kiln Dust Silo Baghouse**
For loadout of Kiln #5 dust silo - Exhaust gas flow rate - 1,500 scfm

II.A.23 **D-333 Product Loadout Baghouse**
Rail loadout - Exhaust gas flow rate - 10,000 scfm

II.A.24 **D-10 Limestone Ore Preparation Baghouse**
Stone dressing screen for Kiln #1 & #2 - Exhaust gas flow rate - 8,000 scfm

II.A.25 **D-310 Limestone Ore Processing Baghouse**
Stone dressing screen for Kiln #3 - Exhaust gas flow rate - 8,000 scfm

II.A.26 **D-414 Limestone Ore Processing Baghouse**
Stone dressing screen for Kiln #4 - Exhaust gas flow rate - 3,100 scfm

II.A.27 **D-514 Limestone Ore Processing Baghouse**
Stone dressing screen for Kiln #5 - Exhaust gas flow rate - 4,500 acfm

II.A.28 **D-1 Limestone Ore Processing Baghouse**
Quarry Crusher & Screen - Exhaust gas flow rate - 28,000 scfm

II.A.29 **D-503 Conveying System**
Dust collection for Kiln #5 limestone conveyor transfer points - Exhaust flow rate - 2,000 acfm

II.A.30 **D-403 Conveying System**
Stone dump from conveyor 408 & 409 to reclaim pile - Exhaust gas flow rate - 2,200 scfm

II.A.31 **D-415 Conveying System**
Limestone dump to Kiln #4 preheater - Exhaust gas flow rate - 600 scfm

II.A.32 **D-479 Dolomitic Lime Handling System Baghouse**
Product transfer baghouse to S-471, T-470, T-471, T-472, T-473, and T-474. The 435 material handling system, which consists of 2 elevators, a vibratory conveyor, a number of belt conveyors, a mixing screw conveyor and a briquetter - Exhaust gas flow rate - 6,220 scfm

II.A.33 **D-7122 Limestone Grinding Plant Baghouse**
Grinding Mill, Direct fire heater, material separator baghouse - Exhaust gas flow rate - 10,000 scfm

II.A.34 **D-7133 Limestone Grinding Plant Baghouse**
Screen, 3 Bucket Elevators, 3 Storage Silos inlet baghouse - Exhaust gas flow rate - 4,500 scfm

II.A.35 **D-7141 Limestone Grinding Plant Baghouse**
Truck load-out, Rail load-out baghouse - Exhaust gas flow rate - 3,500 scfm

II.A.36 **D-7142 Limestone Grinding Plant Baghouse**
Rail load-out baghouse - Exhaust gas flow rate - 4,000 scfm

II.A.37 **C-045 Conveying System**
Fines Truck Loadout Conveyor - 250 tons/hr

II.A.38 **C-305 Conveying System**
Medium and Small Stone Pile Conveyor - 600 tons/hr

II.A.39 **C-MISC1 Limestone Griding Plant**
Miscellaneous Conveyors

II.A.40 **C-MISC2 Sugars Stone System**
Miscellaneous Conveyors

II.A.41 **C-Conveyor - Portable Crusher System**
Conveyors

II.A.42 **C-Coal Handling**
Miscellaneous Conveyors

II.A.43 **R-041 Secondary Crusher**
Cone Crusher - 300 tons/hour

II.A.44 **CR-1 Crusher Portable Crusher System - 690 tons/hr**
Primary Crusher

II.A.45 **CR-2 Crusher Portable Crusher System - 690 tons/hr**
Secondary Crusher

II.A.46 **GEN-1 Generator Sugar Stone System**
Diesel Generator - 100 hp

II.A.47 **GEN-2 Generator Portable Crusher System**
3 - Diesel Generators - 740 hp Total

II.A.48 **KDE-1 Kiln Drive Engine**
Kiln Drive Engine - Kiln #1 - Rated at 52 hp - Diesel - Subject to 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ

II.A.49 **KDE-2 Kiln Drive Engine**
Kiln Drive Engine - Kiln #2 - Rated at 45 hp - Diesel - Subject to 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ

II.A.50 **KDE-3 Kiln Drive Engine**
Kiln Drive Engine - Kiln #3 - Rated at 55 hp - Gasoline

Note: Upon reconstruction, Kiln Drive Engine (KDE-3) shall be replaced with a diesel engine.

II.A.51 **KDE-4 Kiln Drive Engine**
Kiln Drive Engine - Kiln #4 - Rated at 65 hp - Diesel - (Mfg date - Pre 12/19/2002)

II.A.52 **KDE-5 Kiln Drive Engine**
Kiln Drive Engine - Kiln #5 - Rated at 156 hp - Diesel - Subject to 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ

II.A.53 **Auxiliary Pump - Kiln #1**
Auxiliary Hydraulic Pump Engine - Kiln #1 - Rated at 42 hp – Diesel

II.A.54 **Auxiliary Pump - Kiln #2**
Auxiliary Hydraulic Pump Engine - Kiln #2 - Rated at 42 hp – Gasoline

II.A.55 **Auxiliary Pump - Kiln #3**
Auxiliary Hydraulic Pump Engine - Kiln #3 - Rated at 47 hp – Gasoline

II.A.56 **HP-1 Sugar Stone System**
Hopper

II.A.57 **HP-2 Hopper Portable Crusher System**
Feed Hopper

II.A.58 **K-1 Kiln**
Rotary Lime Kiln #1 rated at 600 tons of lime per 24-hour period with a preheater and baghouse emissions control system rated at an exhaust gas flow rate 54,000 scfm and an Air to Cloth (A/C) ratio of 2.2:1.

II.A.59 **K-2 Kiln**
Rotary Lime Kiln #2 rated at 600 tons of lime per 24-hour period with a preheater, cyclone and baghouse emissions control system rated at an exhaust gas flow rate of 48,000 scfm and an A/C ratio of 4.4:1.

II.A.60 **K-3 Kiln**
Rotary Lime Kiln #3 rated at 840 tons of lime per 24-hour period with a preheater, cyclone and baghouse emissions control system rated at an exhaust gas flow rate of 55,000 and a A/C ratio of 4.6:1.

II.A.61 **K-4 Kiln**
Rotary Lime Kiln #4 rated at 1266 tons of lime per 24-hour period with a preheater, cyclone and baghouse emissions control system rated at an exhaust gas flow rate of 100,000 scfm and an A/C ratio of 5:1.

II.A.62 **K-5 Kiln**
Rotary Lime Kiln #5 rated at 1400 tons of lime per 24-hour period with a preheater and baghouse emissions control system rated at an exhaust gas flow rate of 103,000 scfm and an A/C ratio to be determined at the time of stack testing

II.A.63 **R-1 Loadout Sugar Stone System**
Rail Loadout

II.A.64 **N-470 Dolomitic Lime Handling System**
Recycle Bin

II.A.65 **PW**
Pressure Washer

II.A.66 **Feeder-Coal Handling**
4 - Vibratory Feeders

II.A.67 **S-041 Secondary Screen**
Screen - 600 tons/hour - 8' x 20'

II.A.68 **S-1 Screen**
Dolomitic Screen

II.A.69 **S-2 Screen Sugar Stone System**
Screens

II.A.70 **S-3 Screen Portable Crusher System**
Portable Screen

Note: Rated capacities, flow rates and kiln drive engines listed in Condition II.A. are for informational purposes only and do not represent an AO limitation.

II.B Requirements and Limitations

II.B.1 **Sitewide Requirements**

II.B.1.a The source shall notify the Executive Secretary in writing when the new lime kiln #5 and associated equipment, coal silo baghouse (D-591), product baghouses (D-530, D-564, D-547), lime kiln dust silos with baghouses (D-586, D-589), limestone ore preparation baghouse (D-514), conveying systems (D-503), kiln drive engines (KDE-1, KDE-2, KDE-3, KDE-4, KDE-5), auxilary hydraulic pump engines (Kiln #1, Kiln #2, Kiln#3), and the new vibrating screen (S-1) listed in this AO has been installed and is operational. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401-18]

II.B.1.b The following combined lime production limits for the five (5) kilns, the Sugar Stone System, operation of the portable crushing system and truck hauling shall not be exceeded:

A. For Kilns #1, #2, #3, #4 and #5 collectively:

1) 1,516,250 tons lime per rolling 12-month period

2) 4,706 tons lime per day

B. Sugar Stone System

1) 135,000 tons of sugar stone per rolling 12 month period

2) 1,000 hours of operation for the 100 hp generator per rolling 12 month period

C. Portable Crushing System

1) 750,000 tons of limestone per rolling 12 month period

2) 4,000 hours of operation per rolling 12 month period

D. Truck hauling of stone from the quarry to the plant

No more than 108 rounds trips per day (midnight to midnight) 24-hour period.

Compliance with the above 12-month production limitations shall be determined on a rolling 12-month total. Calculations for the 12-month production shall be completed within 25 calendar days from the end of the previous month. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by plant production records. Portable crusher system shall be determined by records of operation. The truck hauling shall be determined by records of operation. The records shall be kept on a daily basis [R307-401]

II.B.1.c Emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

Kiln #1 Baghouse Operation

TSP	0.020 grains/dscf (68 degrees F, 29.92 in Hg)
TSP	0.12 lbs/tsf (pounds per ton of stone fed)
PM_{10}	0.016 grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	6.0 lbs/hr (pounds/hour)
SO_2	22.4 lbs/hr
NO_x	90.0 lbs/hr

Kiln #2 Baghouse Operation

TSP	0.020 grains/dscf (68 degrees F, 29.92 in Hg)
TSP	0.12 lbs/tsf
TSP	8.23 lbs/hr
PM_{10}	0.016 grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	6.58 lbs/hr
SO_2	22.4 lbs/hr
NO_x	120.0 lbs/hr

Kiln #3 Baghouse Operation

TSP	0.020 grains/dscf (68 degrees F, 29.92 in Hg)
TSP	0.10 lbs/tsf

TSP	7.49 lbs/hr
PM_{10}	0.016 grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	7.54 lbs/hr
SO_2	27.2 lbs/hr
NO_x	160.0 lbs/hr

Kiln #4 Baghouse Operation

TSP	0.020 grains/dscf (68 degrees F, 29.92 in Hg)
TSP	0.12 lbs/tsf
TSP	17.14 lbs/hr
PM_{10}	0.016 grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	13.7 lbs/hr
SO_2	38.4 lbs/hr
NO_x	200.0 lbs/hr

Kiln #5 Baghouse Operation

TSP	0.020 grains/dscf (68 degrees F, 29.92 in Hg)
TSP	0.10 lbs/tsf
PM_{10}	0.016 grains/dscf (68 degrees F, 29.92 in Hg)
PM_{10}	11.7 lbs/hr
SO_2	59.0 lbs/hr
SO_2	1.01 lb/ton lime
NO_x	210.0 lbs/hr
NO_x	3.60 lb/ton lime
CO	233.0 lbs/hr
CO	4.00 lb/ton lime

After the installation of an SO_2 CEMS, compliance with the SO_2 emission limit will be based on a 3-hour block average.

Testing for compliance with the lb/ton lime limits must comply with all stack testing requirements. [R307-401]

II.B.1.d Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

Emission Point	Pollutant	Retest	Test Frequency
Kiln #1 Baghouse Stack	TSP	***	+
	PM_{10}	***	+
	SO_2	***	+
	NO_x	***	+

Emission Point	Pollutant	Retest	Test Frequency
Kiln #2 Baghouse Stack	TSP	***	+
	PM_{10}	***	+
	SO_2	*	+
	NO_x	*	+

Emission Point	Pollutant	Retest	Test Frequency
Kiln #3 Baghouse Stack	TSP	***	+
	PM_{10}	***	+
	SO_2	*	+
	NO_x	***	+

Emission Point	Pollutant	Retest	Test Frequency
Kiln #4 Baghouse Stack	TSP	***	+
	PM_{10}	***	+
	SO_2	***	+
	NO_x	***	+

Emission Point	Pollutant	Retest	Test Frequency
Kiln #5 Baghouse Stack	TSP	**	+
	PM_{10}	**	+
	SO_2	**	+
	NO_x	**	+
	CO	**	+

* No Initial Testing was required. The source shall be tested if directed by the Executive Secretary at any time.

** Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the start up of a new emission source, an existing source without an AO, or the granting of an AO to an existing emission source that has not had an initial compliance test performed. If an existing source is modified, a compliance test is required on the modified emission point that has an emission rate limit.

*** Initial compliance testing was required.

Note: Initial testing for Kiln #1 Baghouse was conducted in October 2008.

\+ Test every three years. The Executive Secretary may require testing at any time [R307-401]

II.B.1.e Notification

The Executive Secretary shall be notified at least 60 days prior to conducting any required emission testing for sources subject to 40 CFR 63 Subpart AAAAA. All other sources shall notify the Executive Secretary at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be

tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary.

Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary.

Total Suspended Particulate (TSP)

40 CFR 60, Appendix A, Method 5

PM_{10}

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM_{10}.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM_{10} shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

Sulfur Dioxide (SO_2)

40 CFR 60, Appendix A, Method 6, 6A, 6B, 6C, or other testing methods approved by the Executive Secretary.

Nitrogen Oxides (NO_x)

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other testing methods approved by the Executive Secretary.

Carbon Monoxide (CO)

40 CFR 60, Appendix A, Method 10, or other testing methods approved by the Executive Secretary.

Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

To determine emission rates in units of lbs/ton lime, the emission rate in lbs/hour shall be divided by the tons/hour lime production rate. Lime production rate shall either be a direct measurement or shall be calculated using the following conversion factor: 2 tons of limestone feed equates to 1 ton of lime produced (2 tons limestone: 1 ton lime)
[R307-401]

II.B.1.f New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the production rate listed in this AO. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

1) Testing shall be at no less than 90% of the production rate achieved to date.

2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.

3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

Existing Source Operation

For the existing kilns, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years
[R307-401]

II.B.1.g Visible emissions from the following emission points shall not exceed the following values:

A.	Kilns #1, #2, #3, #4, and #5	15% opacity
B.	All ancillary silo and storage bin baghouses	10% opacity

C.	Product baghouses	10 % opacity
D.	All crushers	15% opacity
E.	All screens	10% opacity
F.	All conveyor transfer points	10% opacity
G.	All diesel engines	20% opacity
H.	Conveyor drop points	20% opacity
I.	Subpart OOO baghouses	7% opacity
J.	Subpart AAAAA PSH operations stack emissions	7% opacity
K.	Subpart AAAAA PSH operations fugitive emissions	10% opacity
L.	All other points sources	20% opacity
M.	Fugitive dust	See Roads and Fugitive Dust Requirements

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

Visible emissions from haul road traffic shall be minimized in accordance with the fugitive dust control plan
[R307-401]

II.B.1.h Graymont shall make at least one visual opacity survey each quarter for each kiln drive engine. The visual opacity survey shall be performed while the unit is operating by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visual emissions observer (VEO). If visible emissions are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9. Graymont shall maintain a log of the visual opacity surveys, opacity determinations, and all data required by 40 CFR 60, Appendix A, Method 9. [R307-401]

II.B.1.i All records referenced in this AO or in applicable NSPS and/or NESHAP and/or MACT standards, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:

A.	Used oil consumption	Five years

	B.	Emission inventories	Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
	C.	Fugitive dust control	Five years
	D.	All other records	Five years. [R307-401]

II.B.1.j Graymont shall use coal as the primary fuel, except a combination of coal and petroleum coke (pet coke) may be used in Kilns #1 and #5, and propane and fuel oil as a startup fuel in all kilns. Prior to burning petroleum coke in Kilns #1 and #5 or coal with a sulfur content in excess of 1.0 lb/MMBTU in Kilns #1, #2, #3, #4, or #5, an SO_2 CEM must be installed, certified, and operating on that kiln. [R307-401]

II.B.1.k Graymont shall use propane, diesel, and used oil in any combination in the direct fire heating system for the limestone grinding plant. [R307-401]

II.B.1.l The sulfur content of any coal or any mixture of coals burned shall not exceed 1.0 pounds of sulfur per MMBTU heat input. Sulfur content shall be determined by Graymont Western or the coal supplier using ASTM Method D-3177-75, D-3174-03, D-3176-89, D-4239-94, D-55016-95 or an approved equivalent ASTM Method. If Graymont chooses supplier certification, the sulfur content shall be tested quarterly from a composite sample. If Graymont chooses to test the sulfur content of the coal, the composite sample shall be tested quarterly from a composite grab sample taken every 24 hours of operation. Records, or supplier furnished certifications, of this testing shall be kept on-site for a period of five (5) years and be provided to the Executive Secretary upon request.

After a SO_2 CEMS has been installed, calibrated, and is operating on a kiln, the coal that is burned in that kiln is exempt from the 1.0 pounds of sulfur per MMBTU heat input limitation of UAC R307-203-1(1)
[R307-203-1]

II.B.1.m The sulfur content of any fuel oil burned shall not exceed 0.85 pounds of sulfur per MMBTU heat input. Sulfur content shall be decided by ASTM Method D-3175-75, or an approved equivalent. The sulfur content shall be tested if directed by the Executive Secretary. [R307-401]

II.B.1.n The air heating combustor burning used oil for energy recovery shall comply with the following:

A. The concentration/parameters of contaminants in any used oil burned as fuel shall not exceed the following levels:

1)	Arsenic	5	ppm by weight
2)	Cadmium	2	ppm by weight
3)	Chromium	10	ppm by weight
4)	Lead	100	ppm by weight
5)	Total halogens	1,000	ppm by weight
6)	Sulfur	0.50	percent by weight

B. The flash point of all used oil to be burned as fuel shall not be less than 100 degrees F

C. Used oil that does not exceed any of the listed contaminants content may be burned. The owner/operator shall record the quantities of oil burned.

D. Sources utilizing used oil as a fuel shall comply with the State Division of Solid and Hazardous Waste in accordance with R315-15, UAC. [R307-401]

II.B.1.o Graymont shall install, calibrate, maintain, and continuously operate a continuous emissions monitoring system for the continuous measurement of opacity on kiln stacks #1, #2, #3, #4 and #5. The owner/operator shall record the output of the system for measuring the opacity of emissions. The monitoring system shall operate continuously in accordance with the DAQ Policy Document for Continuous Emission Monitoring Systems. The monitoring system shall comply with all applicable sections of R307-170, UAC and 40 CFR 60, Appendix B, Specification 1 - Opacity.

Note: Kiln #1 shall have an opacity monitor installed and certified within 180 days of the baghouse installation. [R307-170]

II.B.1.p Graymont shall install, calibrate, maintain, and continuously operate a continuous emissions monitoring system (consisting of a SO_2 pollutant concentration monitor and a flow monitoring device) for the continuous measurement of SO_2 emissions on a kiln if that kiln burns pet coke or coal with a sulfur content in excess of 1.0 lb Sulfur/MMBtu.

The owner/operator shall record the output of the system for measuring SO_2 emissions. The monitoring system shall operate continuously in accordance with the DAQ Policy Document for Continuous Emissions Monitoring Systems. The monitoring system shall comply with all applicable sections of R307-170, UAC and 40 CFR 50 Appendix B, Performance Specifications 2 - SO_2 and NO_x Continuous Emission Monitoring Systems [R307-170]

II.B.1.q When a SO_2 CEMS has been installed calibrated, and is operating, the emission rate of SO_2 in pounds per hour measured by the SO_2 CEMS for each 3-hour block averaging period will be calculated by the following formula:

$$Eh = K * Chp * Qhs X [(100 - \%H20)/100]$$

Where: Eh = hourly SO_2 mass emission rate during unit operation, lb/hr
K = 1.66 E-7 for SO_2, lb/scf/ppm
Chp = hourly average SO_2 concentration during unit operation, ppm (dry)
Qhs = hourly average volumetric flow rate during unit operation, scfh (wet)
$\%H_2O$ = constant moisture value specific to each kiln, percent by volume.
[R307-401]

II.B.1.r All continuous opacity monitoring devices as required in federal regulations and state rules shall be installed and operational prior to placing the affected source in operation. SO_2 CEMS shall be installed and operational on a kiln prior to that kiln burning coal with a sulfur content in excess of 1.0 lb Sulfur/MMBtu or burning pet coke.

Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), the owner/operator of an affected source shall continuously

operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13(e) and R307-170, UAC
[40 CFR 60, R307-170]

II.B.1.s The Executive Secretary shall consider the continuous monitoring requirements to be met when the following provisions are met:

A. Opacity Monitors and SO_2 CEMS

1) Shall operate in accordance with 40 CFR 60.13 and R307-170 UAC.

B. Excess Emission Requirements

1) At no time shall Graymont allow excess gaseous emissions to be emitted to the atmosphere, except as provided by the provisions of R307-107 (Unavoidable Breakdowns), UAC.

2) The Executive Secretary shall consider the source to be in compliance with SO_2emission limits when the following provisions are met:

a. Prior to installation of a SO_2 CEMS on a kiln, the average of three onehour stack test results are less than the corresponding SO_2 emission limit for that kiln.

b. After installation of the SO_2 CEMS on a kiln, the 3-hour block average is less than the corresponding SO_2 emission limit for that kiln.

c. Three-hour block averages will begin on 12:01 am and end every 3 hours, thereafter.

C. Reporting

1) All sources required to install a continuous emission monitor shall submit a quarterly report in an electronic format provided by the DAQ.

2) All exceedances are to be reported in the quarterly report with explanations (R307-170-8 Reason Categories, UAC) and corrective actions
[40 CFR 60, R307-170]

II.B.1.t The owner/operator shall abide by all applicable provisions of 40 CFR 60, NSPS Subpart A (General Provisions), Subpart HH (Lime Manufacturing Plants), Subpart Y (Coal Preparation Plants) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). [40 CFR 60 Subpart OOO, 40 CFR 60 Subpart Y, 40 CFR 60 Subpart HH]

II.B.1.u The owner/operator shall abide by all applicable provisions of 40 CFR 63, MACT Standards Subpart A (General Provisions), 63.1 to 63.16 and Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), 40 CFR 63.6580 to 63.6675 for stationary diesel engines on site. [40 CFR 63 Subpart ZZZZ]

II.B.1.v The owner/operator shall abide by all applicable provisions of 40 CFR 60, NSPS Subpart A (General Provisions), 40 CFR 60.1 to 60.18 and Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), 40 CFR 60.4200 to 60.4219 for stationary diesel engines on site. [40 CFR 60 Subpart IIII]

II.B.2 **Haul Roads and Fugitive Dust Requirements**

II.B.2.a All unpaved roads and other unpaved operation areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition, such that the opacity shall be minimized at all times the areas are in use or unless it is below freezing. Records of water treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

A. Date

B. Number of treatments made, dilution ration, and quantity

C. Rainfall received, if any, and approximate amount

D. Time of day treatments were made
[R307-401]

II.B.2.b Additional haul road limitations shall include vehicle speed limitations as follows:

A. Twenty five (25) mph within the plant and in the vicinity of the crusher in the quarry area.

B. Forty (40) mph within 1.5 miles of either the plant or the quarry on the quarry road.

C. Fifty (50) mph outside of the 1.5 mile distance point of the plant or quarry on the quarry road.

D. Forty (40) mph between the plant and the paved highway.

The haul road speed shall be posted
[R307-401]

II.B.2.c The ½-mile portion of the main haul road, closest to the plant, shall be swept at least once every 30 days. Additional sweeping shall be required, if necessary, as determined by the responsible plant personnel or the Executive Secretary. [R307-401]

II.B.2.d The main haul road and the sales road shall be chemically treated to stabilize the road surface at least three times per year. More frequent applications shall be applied, if necessary or required by the fugitive dust control plan or the Executive Secretary. Records of chemical treatment shall be kept for all periods when the plant is in operation. Records shall include the number of treatments made, dilution ratio, and quantity. [R307-401]

II.B.2.e Graymont shall minimize the drop distance from the radial stackers to the stockpiles by

stockpile building procedures of building to the top and side of the established part of the pile except for the initial pile building. [R307-401]

II.B.2.f Water sprays or chemical dust suppression sprays shall be installed at the following limestone handling points, if otherwise uncontrolled, to control fugitive emissions:

A. Crushers

B. Screens (emissions not controlled by a baghouse)

C. Conveyor transfer points

The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary, such that the visible emission limitations shall not be exceeded, unless the ambient temperature is below freezing
[R307-401]

II.B.2.g Graymont shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources. The full text of R307-205, Emission Standards: Fugitive Emissions and Fugitive Dust is included as Appendix A. However, to be in compliance, this source must operate in accordance with the most current version of R307-205. [R307-205]

II.B.2.h Graymont shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Cricket Mountain Plant. Graymont shall abide by the most current fugitive dust control plan approved by the Executive Secretary. [R307-401]

II.B.3 **Rotary Lime Kiln Requirements**

II.B.3.a Kiln #2's ID fan motor rate shall not exceed 1,800 rpm. The Fan Tachometer readings shall be observed and logged once per day. [R307-401]

II.B.3.b During start-up procedures, the baghouses for Kilns #1, #2, #3, #4, and #5 shall be allowed to be bypassed while burning start-up fuels (propane, diesel). Baghouse bypassing is allowed for 7 hours after coal firing is commenced. If bypassing a baghouse occurs more than 7 hours after coal firing is commenced, Graymont shall follow the notification requirements listed in R307-107-2, UAC. In addition if the baghouse is not in service within the 7 hour limit. Graymont shall:

A. Record each occurrence in a log

B. Calculate the excess emissions

C. Show justification for failure to have the baghouse in service

D. Submit an annual report of the occurrences of excess emissions and justification by January 31 of the following year

E. Include the excess emissions in the emissions inventory [R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), OOO: NonmetallicMineral ProcessingPlnts
NSPS (Part 60), A: General Provisions
NSPS (Part 60), HH: Lime Manufacturing Plants
NSPS (Part 60), IIII: Stationary Comp/Ignit R.I.C.E
MACT (Part 63), AAAAA: Lime Manufacturing
MACT (Part 63), ZZZZ: Recipro. Int. Comb Engine (RICE)
NSPS (Part 60), Y: Coal Preparation Plants

PERMIT HISTORY

The final AO will be based on the following documents:

Supersedes DAQE-AN0103130027-08 dated August 27, 2008

ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
ATT	Attainment Area
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds